

REMARKS

Claim 2 has been canceled.

Claims 1 and 3-9 are pending.

The applicant thanks the Examiner for indicating that claims 4, 5, 8 and 9 include allowable subject matter. The terms "CTL" and "CONT" have been defined in the claims. Therefore, applicant respectfully requests withdrawal of the rejections under 35 U.S.C. § 112, par. 2.

Claims 4 and 8 have been rewritten in independent form and, therefore, should be in condition for allowance. Claims 5 and 9 depend from claim 4 and also should be in condition for allowance.

The remaining claims were rejected as follows:

- * Claims 1 and 3 were rejected as anticipated by U.S. Patent No. 4,395,665 (Buchas).
- * Claim 6 was rejected as unpatentable over the Buchas patent in view of U.S. Patent No. 5,936,516 (Narea et al.).
- * Claim 7 was rejected as unpatentable over the Buchas patent in view of U.S. Patent No. 5,436,622 (Gutman et al.).

As discussed below, applicant respectfully requests reconsideration.

Independent claim 1 recites a vibrator controlling circuit that includes a square wave generating circuit, a switching element and a frequency shift detecting circuit. The latter circuit detects a frequency shift between (i) the square wave signal from the square wave generating circuit and (ii) the resonance frequency of the vibrator.

The Buchas patent discloses a control system for a vibrating member such as a feeder 10 with a bowl 14 that vibrates at a resonant frequency. The resonant frequency is detected by

detector 24 and, through the control system, causes a driver 22 to be excited at the same frequency.

In particular, according to the Buchas patent, the signal from the frequency detector 24 passes to a squaring amplifier 28, which converts the signal to a square wave (col. 3, lines 45-47). The control system includes a phase-locked loop (PLL) circuit 34.

According to the Buchas patent, if the resonant frequency of the bowl 14 varies, the PLL circuit changes its output frequency in a corresponding manner (col. 5, lines 21-27). The output from the PLL circuit 34 is sent to a switch 44, which is coupled to the driver 22 so that the frequency at which the driver is excited follows the change in the resonance frequency.

Therefore, according to the Buchas patent, the PLL circuit 34 detects a change in the frequency of the vibrating member (*i.e.*, the bowl). The circuitry disclosed in the Buchas patent does not detect a frequency shift between a square wave signal from a square wave generating circuit and the resonance frequency of the vibrator, as recited in claim 1.

At least for that reason, claim 1, as well as dependent claim 3, is anticipated by the Buchas patent.

The Gutman et al patent also does not disclose or suggest the claimed "frequency shift detecting circuit" or the subject matter of any of the pending claims as a whole. That patent discloses a portable electronic device (*e.g.*, a pager or portable telephone) capable of generating vibratory alerts. The device includes a receiver 70 for receiving RF paging messages carried on a paging protocol such as POC-SAG.

Upon receiving a message, the receiver 70 sends a signal to vibrate controller 72, which functions to adjust the vibration frequency using a value stored in memory 74. The stored value is sent to a variable frequency generator 76, which generates a signal that is converted by driver 78 into a pulsating signal (*i.e.*, a square wave signal—*see* T3 in FIG. 3) to drive the vibrator 60. *See* col. 4, lines 37-57 and col. 5, lines 8-16.

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In any event, the Gutman et al. patent does not disclose or suggest a circuit to detect a frequency shift between (i) a square wave signal from the square wave generating circuit and (ii) the resonance frequency of a vibrator.

Nor is that feature disclosed or suggested by the Narea et al. patent.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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